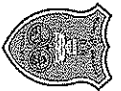




Introduction to Clinical Dentistry & Oral Diagnosis (Theory)

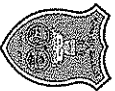
Year 3 – summer semester

- > Screening, patients' files and assigning patients to students
- > Preparing, receiving, treating, and dismissing the patient
- > Dispensary
- > Instruments handling, transport, packaging, sterilization
- > Lab work, prescription, disinfection
- > Clinical safety protocols and potential hazards



Caries Risk Assessment

- ✓ The determination of the likelihood of the incidence of caries (ie the number of new cavitated or incipient lesions) during a certain time period or the likelihood that there will be a change in the size or activity of lesions already present.
- ✓ Caries-risk assessment models currently involve a combination of factors including: diet, fluoride exposure, a susceptible host and microflora that interplay with a variety of social, cultural and behavioural factors.



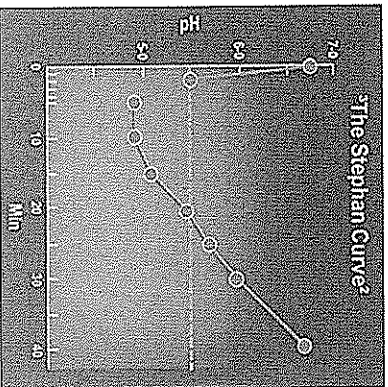
Caries Risk Assessment

- ✓ It is now known that surgical intervention of dental caries alone does not stop the disease process. Additionally, many lesions do not progress, and tooth restorations have a finite longevity.
- ✓ Modern management of dental caries should be more conservative and includes:
 - > early detection of noncavitated lesions
 - > identification of an individual's risk for caries progression
 - > understanding of the disease process for that individual
 - > application of preventive measures



Caries Risk Assessment

- ✓ NICE recall intervals and oral health – 2004
- ✓ Caries risk assessment form – American Dental Association 2009
- ✓ Guideline on Caries-risk Assessment and Management for Infants, Children, and Adolescents - AMERICAN ACADEMY OF PEDIATRIC DENTISTRY 2013

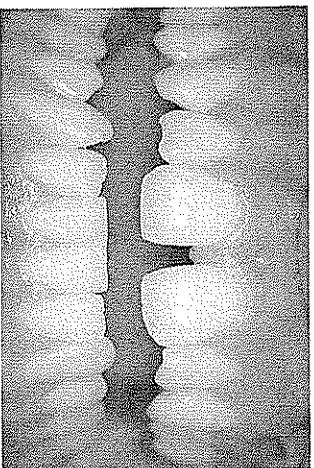


CARIES RISK ASSESSMENT	
Social history	Social class, dental awareness, dental aspirations, caries rate in siblings
Medical history	Medical condition, handicap, Cariogenic medication, Xerostomia
Dietary habits	Sugar intake, availability of snacks
Use of fluoride	Drinking water, toothpaste, supplements
Plaque control	Oral hygiene
Saliva	Flow rate, buffering capacity, S. mutans and Lactobacillus counts
Clinical evidence	New carious lesions, premature extractions, anterior caries/ restorations, multiple restorations, Partial dentures, orthodontics, presence/ absence of fissure sealant

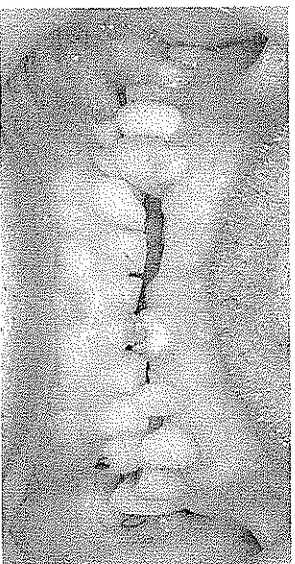
Table 6. Example of a Caries Management Protocol for 26 Year-Olds			
Risk Category	Diagnosis	Prevalence	Restorative
Low risk	- Small early to mid smooth - Radiographs every 12 to 24 months	- "Tooth-friendly" brushing with fluoride toothpaste	- No - No fillings
Moderate risk	- Small early to mid smooth - Radiographs every 12 to 24 months	- "Tooth-friendly" brushing with fluoride toothpaste - Fluoride varnish - Professional topical fluoride every 12 months	- No - Active surveillance of emerging lesions - Resin infiltration of early lesions - Composite filling of carious lesions
High risk	- Small early to mid smooth - Radiographs every 12 to 24 months	- "Tooth-friendly" brushing with fluoride toothpaste - Fluoride varnish - Professional topical fluoride every 12 months	- No - Active surveillance of emerging lesions - Resin infiltration of early lesions - Composite filling of carious lesions
Very high risk	- Small early to mid smooth - Radiographs every 12 to 24 months	- "Tooth-friendly" brushing with fluoride toothpaste - Fluoride varnish - Professional topical fluoride every 12 months	- No - Active surveillance of emerging lesions - Resin infiltration of early lesions - Composite filling of carious lesions



Treatment planning – clinical cases:



Mr. G.S.
Age at presentation: 62



The NICE guidelines 2004:

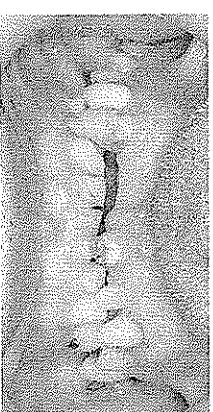
- For adult patients, NICE recommends a recall between three months and two years, based on a risk assessment, taking into account a checklist of risk factors, such as alcohol and tobacco use.
- The recommended interval for children is between three and 12 months.
- The actual interval should be a clinical decision by the dentist based on the patient's needs

Chief complaint:

- "I lost my front bridge and I'm not happy with how my teeth look"
- "I sometimes struggle to chew steaks"

History of present complaint

Lost his maxillary right incisors (UR1&2) 30 years ago due to trauma. The edentulous space was restored with a five-unit fixed-fixed bridge (13-22) which was decemented recently after it became progressively loose.



Medical history:

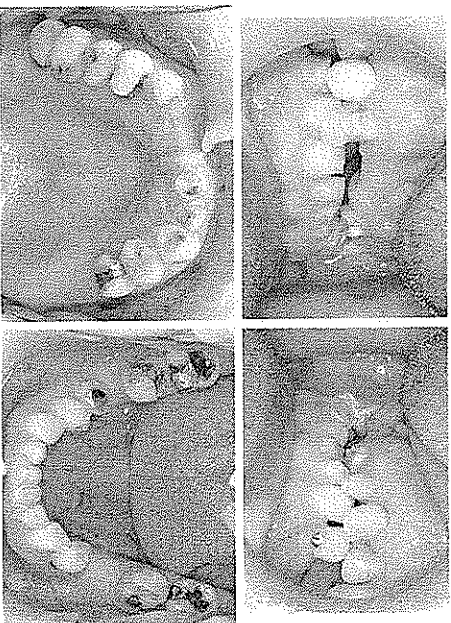
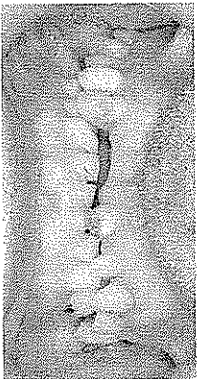
Fit and well.
No allergies.
No medication.

Social history:

Lives with his wife
Full-time employed lorry driver/ no
attendance issues.
Non-smoker/ never smoked
10 units alcohol/ week

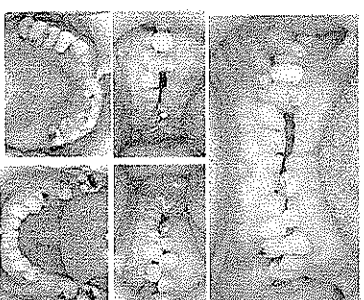
Dental history:

Regular attendee/ every 1 year.
Brushes once-twice daily/
occasional flossing.
Unaware of teeth grinding.
Never worn RPD before.



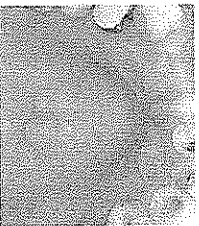
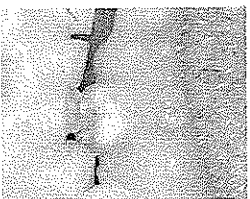
Extra-oral examination:

TMJ: NAD
Muscles of Mastication: NAD
Facial symmetry: NAD
Lips: competent and low maxillary lip line



Intra-oral examination:

Soft tissues: Labial discharging sinus tract (UL1).
Hard tissues: 6-7mm Torus palatinus
Teeth charting:



14	13										12
	Comp	Comp	Comp	MC-Cr	Comp		#	#	Comp	Amg	
R	8	7	6	5	4	3	2	1	1	2	3
L	8	7	6	5	4	3	2	1	1	2	3
Amg											

Comp: composite filling, Amg: amalgam filling, MC-Cr: metal-ceramic crown, #: fractured crown, TSL: tooth surface loss

Intra-oral examination:

BPE:

2	1	2
2	1	1

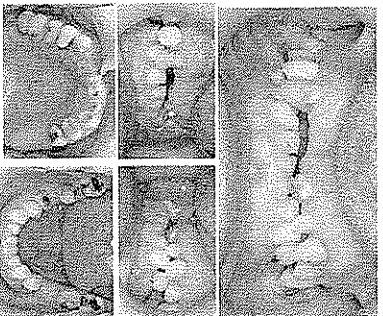
Bleeding index: 30%

Plaque index: 30%

Oral hygiene: Fair with some visible plaque and calculus deposits.

Occlusal features:

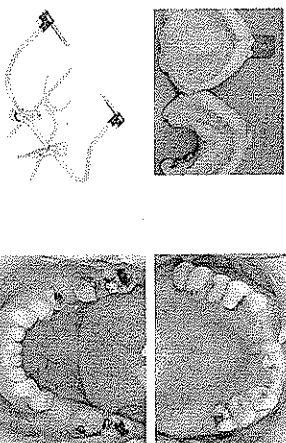
- ✓ Class I skeletal pattern.
- ✓ Pseudo class III incisor relationship (habitual position).
- ✓ Overjet: 1 mm
- ✓ Overbite: 1 mm
- ✓ 1.5mm anterior slide From RCP to ICP.
- ✓ Lateral excursion: Canine guidance on both sides.



- ✓ Sensibility testing: (Endo frost and electric pulp tests):

Negative response:	8	1	12
	1	1	

- ✓ Baseline records: maxillary and mandibular impressions, jaw registration in CR and face-bow record.



Diagnoses And Clinical Findings Summary:

1. Generalized tooth surface loss (TSL).
2. Failing direct and indirect restorations:

7	6	5	4	3	4
8	7				
3. Caries:

7	6	5	3	1	2	3
8	7					
4. Necrotic pulp:

8	1	1	12
5. Chronic apical periodontitis:

8	2	1	12	6	7	8
6. Missing teeth:

8	2	1	12	6	7	8

Treatment Options:

- 1- Extraction of existing teeth and provision of complete dentures.
- 2- Restore the existing teeth with direct and indirect restorations and:
 - a) accept edentulous spaces.
 - b) restore edentulous spaces with a removable partial denture(s).
 - c) Restore the edentulous spaces with fixed partial bridges.
 - d) Restore the edentulous spaces with implant supported prostheses.

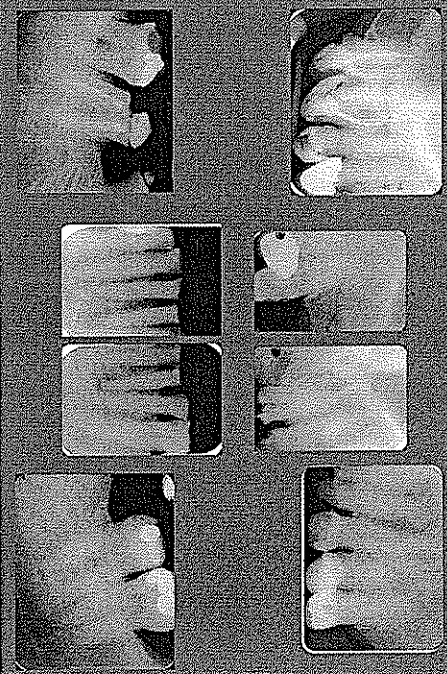
Treatment Plan

1. Stabilization and prevention:
 - a- Improve oral hygiene and dietary habits.
 - b- Stabilize active caries and periodontal disease.
 - c- Extraction of teeth with hopeless prognosis.
2. Preliminary treatment phase:
 - a- Increase the OVD.
 - b- Improve function and aesthetics using direct restorations.
3. Definitive treatment phase:

Restore the existing teeth with direct and indirect restorations at the new OVD.
4. Maintenance:

Maintain a healthy dentition and oral tissues.

Radiographic Examination

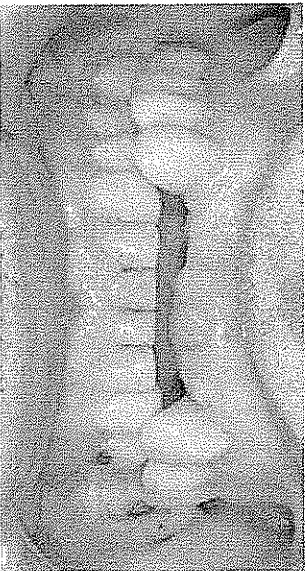


Stabilization phase:

- ✓ Oral hygiene instructions.
- ✓ Dietary analysis and advice.
- ✓ Fluoride advice.
- ✓ Supra-gingival scaling and polishing.
- ✓ Extraction of the non-restorable tooth 17.
- ✓ Excavation and temporization of carious lesions:

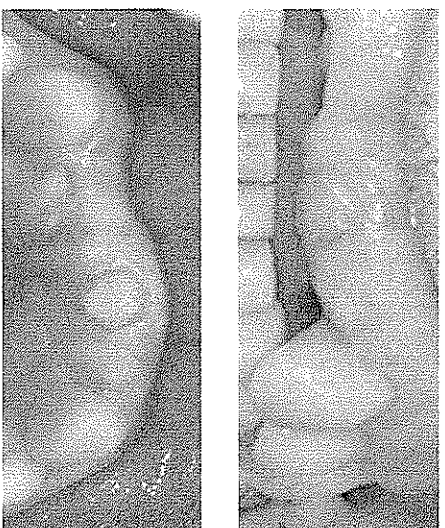
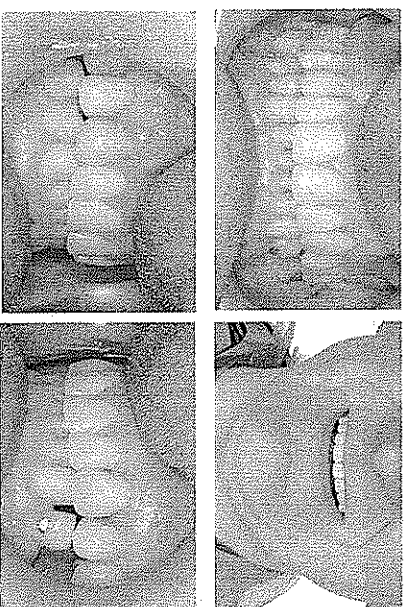
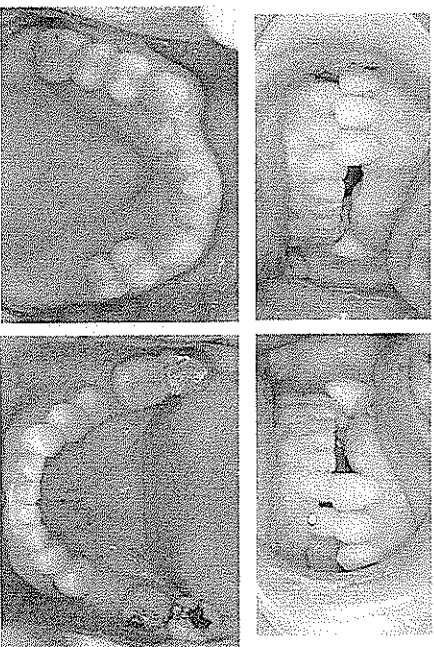
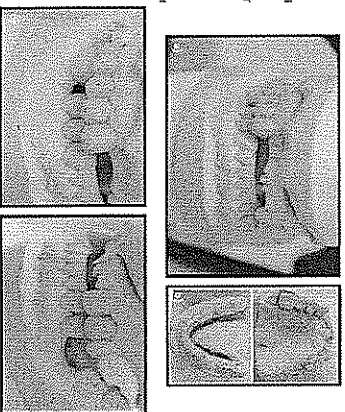
7	6	5	4	1	3	4
			8	7		
- ✓ Endodontic debridement:

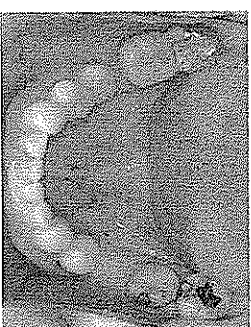
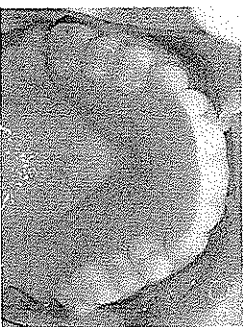
1	2
1	
- ✓ Reassessment of the outcomes from the stabilization phase (i.e.: assessment of oral hygiene, bleeding & plaque indices and dietary habits)



Preliminary treatment phase:

- ✓ Full arch functional and aesthetic diagnostic wax-up at 3mm increased OVD.
- ✓ Composite coronal seal at
- ✓ Composite build-up at 3m of existing teeth.
- ✓ Maxillary acrylic partial d

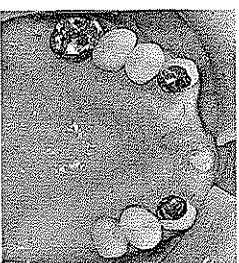
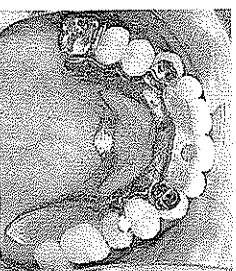
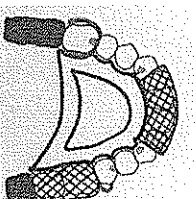




Definitive treatment phase:

Maxillary definitive restorations:

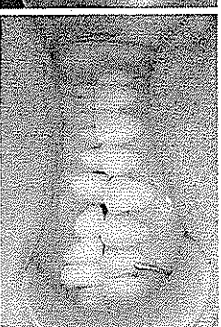
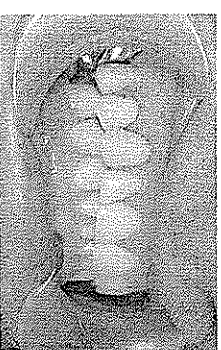
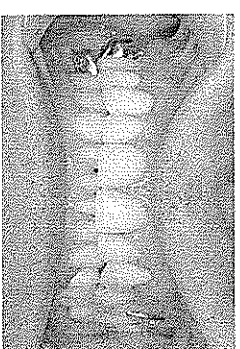
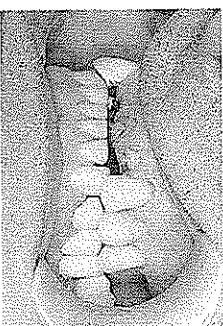
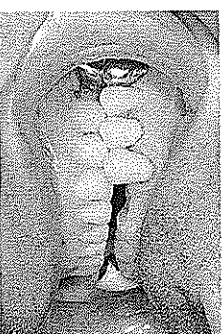
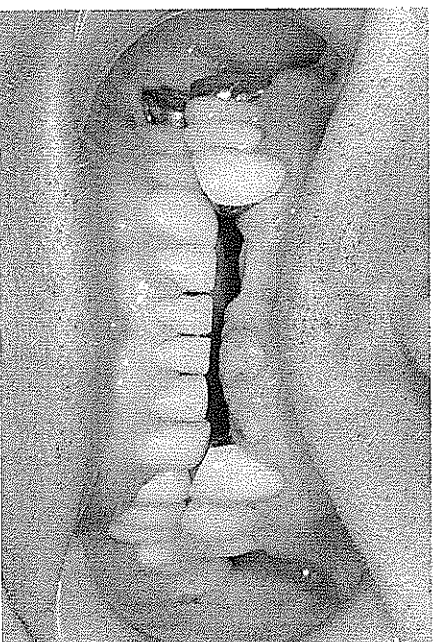
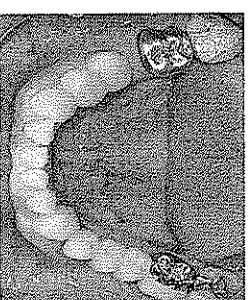
- 1- Co-Cr RPD design.
- 2- Milled metal-ceramic crowns: teeth 13 and 23.
- 3- Milled gold crown: tooth 16.
- 4- Maxillary Cr-Co RPD insertion.

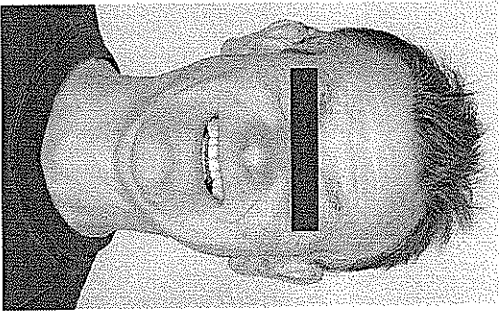
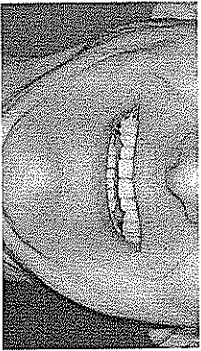


Definitive treatment phase:

Mandibular definitive restorations:

- 1- Full gold crown: LR7.
 - 2- Fixed-fixed metal-ceramic bridge from LL4 – LL7
- (Edentulous 46 space was accepted and no restoration was planned).

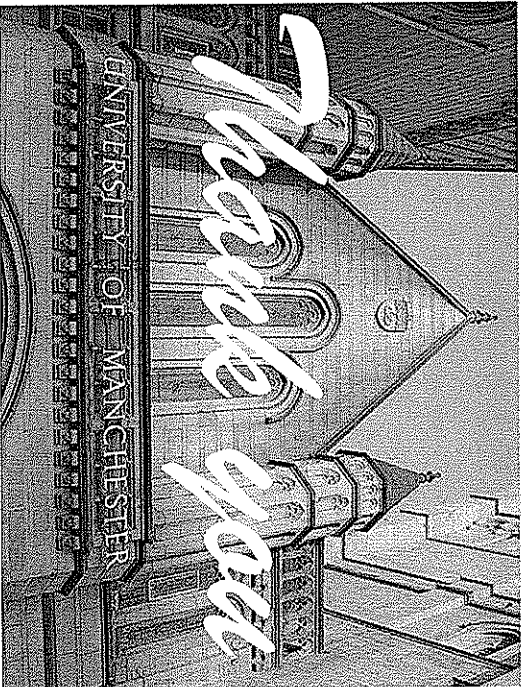
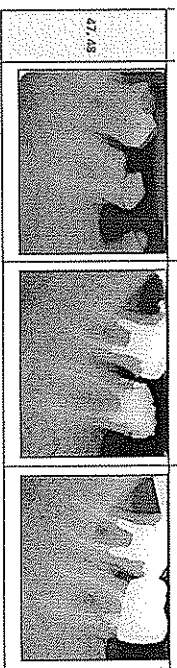
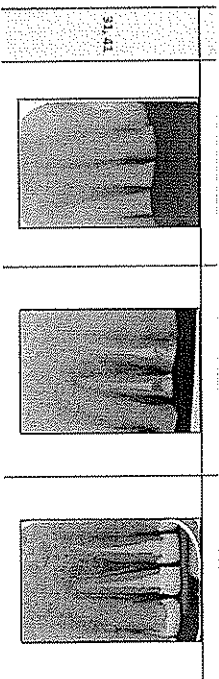







Maintenance phase:

At the 6-month review appointment:

- > Patient presented with good oral hygiene and healthy gingivae
(bleeding and plaque indices 11% and 10% respectively).
- > His occlusion was stable.
- > Peri-apical radiographs taken (after 1 year of completion of root canal treatments) showed satisfactory peri-radicular healing



Tooth	Radiograph		
	Pre-operative	Post-operative	1 year review
16			
21, 22	